

# Java Regular Expressions - Interview Cheat Sheet

## What is Regex?

A regular expression is a sequence of characters to match patterns in strings.

## Java Classes

- Pattern: Compiles regex
- Matcher: Performs match operations
- String.matches(): Shortcut method

## Core Metacharacters

- . : Any character
- ^ : Start of string
- \$ : End of string
- \* : 0 or more
- + : 1 or more
- ? : 0 or 1
- [] : Char class
- { } : Repetition
- \d : Digit
- \w : Word char
- \s : Whitespace
- () : Grouping
- | : OR

## Common Patterns

Email: `^[w.-]+@[w.-]+\w{2,}$`

Phone: `^\d{10}$`

Username: `^[a-zA-Z0-9_]{5,15}$`

Password: `^(?=.*[A-Z])(?=.*[a-z])(?=.*\d)(?=.*[@#$$%^&+=]).{8,}$`

## matches() vs find()

matches(): Matches whole string

find(): Finds part of the string

## Tips

- Java strings need double backslash: `"\\d"`
- Use `Pattern.CASE_INSENSITIVE` for ignoring case
- Use `?` for lazy match: `".*?"`